



Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

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May 24, 2016

Mr. David Bilotta
HealthAlliance Hospital-Burbank
Campus
275 Nichols Road
Fitchburg, MA 01420

RE: Fitchburg
Transmittal No.: X268370
Application No.: CE-16-005
Class: *SM-25*
FMF No.: 132668
AIR QUALITY PLAN APPROVAL

Dear Mr. Bilotta:

The Massachusetts Department of Environmental Protection (“MassDEP”), Bureau of Air and Waste, has reviewed your Limited Plan Application (“Application”) listed above. This Application concerns the installation and operation of two boilers at your hospital located at 275 Nichols Road in Fitchburg, Massachusetts (“Facility”).

This Application was submitted in accordance with 310 CMR 7.02 Plan Approval and Emission Limitations as contained in 310 CMR 7.00 “Air Pollution Control” regulations adopted by MassDEP pursuant to the authority granted by Massachusetts General Laws, Chapter 111, Section 142 A-O, Chapter 21C, Section 4 and 6, and Chapter 21E, Section 6. MassDEP’s review of your Application has been limited to air pollution control regulation compliance and does not relieve you of the obligation to comply with any other regulatory requirements.

MassDEP has determined that the Application is administratively and technically complete and that the Application is in conformance with the Air Pollution Control regulations and current air pollution control engineering practice, and hereby grants this **Plan Approval** for said Application, as submitted, subject to the conditions listed below.

Please review the entire Plan Approval, as it stipulates the conditions with which the Facility owner/operator (“Permittee”) must comply in order for the Facility to be operated in compliance with this Plan Approval.

1. DESCRIPTION OF FACILITY AND APPLICATION

A. HISTORY

HealthAlliance Hospital-Burbank Campus (“the Permittee”) operates a hospital at 275 Nichols Road in Fitchburg, Massachusetts (“the Facility”).

In the past, MassDEP issued several plan approvals for boilers at the Facility. Those boilers are no longer in service and therefore the plan approvals no longer apply.

In 1992 the Permittee installed a Detroit Diesel model 16V71T emergency generator rated at 450KW. This generator was exempt from Plan Approval requirements.

In 1995, MassDEP issued a Limited Plan Approval for a temporary boiler to be used until two new permanent boilers could be installed. The Permittee inadvertently failed to file an application for Plan Approval for the two new permanent boilers.

On September 27, 2011, MassDEP issued a 25% Facility Emission Cap to the Permittee.

In 2015, it came to the attention of the Permittee that the two boilers installed in 1995 required Plan Approval. The Permittee met with MassDEP to discuss permitting requirements. On February 18, 2016, MassDEP received the present application Transmittal No. X268370 for the boilers.

B. PROJECT DESCRIPTION

The boilers listed in this Application are two identical Cleaver Brooks units capable of firing natural gas or oil. The Permittee does not currently fire oil in the boilers but under this Application is proposing to have flexibility to fire oil. The oil will be ultra-low sulfur distillate (maximum sulfur content of 0.0015% by weight).

C. APPLICABLE REGULATIONS

1. State Requirements

This project is subject to 310 CMR 7.02(8) requirement for Best Available Control Technology (BACT). The Application documented that for new boilers, Top-Case BACT is represented by the emission limits specified in 310 CMR 7.26(30) Industry Performance Standards for Boilers. However, the two boilers as manufactured and installed in 1995 were not designed and built to achieve the referenced Top-Case BACT emission limits.

The Application details the actual typical annual emissions from the boilers as being far below the maximum potential emissions. The Facility is already subject to the 25% Emissions Cap

issued in 2011, with greatly reduced Facility potential emissions. The Permittee has requested total fuel firing limits for both oil and gas which would put the allowable emissions of nitrogen oxides (NO_x) and carbon monoxide (CO) below the levels that could potentially be emitted by BACT-compliant boilers.

MassDEP has determined that Best Available Control Technology (BACT) pursuant to 310 CMR 7.02 for this application is a fuel usage restriction to maintain potential emissions of both NO_x and CO below 10 tons per year.

2. Federal Requirements

The Permittee has indicated that the boilers are subject to 40 CFR 60 Subpart Dc. Also, if the boilers commence firing fuel oil, they will become subject to 40 CFR 63 Subpart JJJJJ. Since MassDEP has not accepted delegation for Subpart Dc or Subpart JJJJJ for sources which are not subject to 310 CMR Appendix C, the Permittee is advised to consult with EPA Region 1 at 5 Post Office Square, Suite 100, Boston, MA 02109-3912, telephone: (617)918-1111. Other applicable requirements may include notification, record keeping, and reporting requirements.

2. EMISSION UNIT (EU) IDENTIFICATION

Each Emission Unit (EU) identified in Table 1 is subject to and regulated by this Plan Approval:

Table 1			
EU	Description	Design Capacity	Pollution Control Device (PCD)
2	Cleaver Brooks Boiler CB200-500	24,411,600 Btu/hour	None
3	Cleaver Brooks Boiler CB200-500	24,411,600 Btu/hour	None

Table 1 Key:

EU = Emission Unit Number

PCD = Pollution Control Device

Btu = British Thermal Unit

3. APPLICABLE REQUIREMENTS

A. OPERATIONAL, PRODUCTION and EMISSION LIMITS

The Permittee is subject to, and shall not exceed the Operational, Production, and Emission Limits as contained in Table 2:

Table 2						
EU	Operational / Production Limit	Air Contaminant	Emission Limit (Note 1)			
2 and 3	1. Natural Gas Usage less than or equal to 132,000,000 cubic feet per year. 2. Fuel Oil Usage less than or equal to 570,000 gallons per year. 3. Limit total fuel usage (natural gas and/or fuel oil) to meet the TPM and TPY Emission Limits.		Oil Firing lb/MMBtu	Gas Firing lb/MMBtu	TPM (Total for both boilers)	TPY (Total for both boilers)
		CO	0.07	0.15	1.7	9.9
		NOx	0.25	0.12	1.7	9.9
		PM	0.025	0.01	0.17	1.0
		VOC	0.025	0.016	0.18	1.1
		SO2	0.002	0.001	0.017	0.1
		HAP (total)	0.0005	0.0019	0.03	0.2
Facility-wide (Note 2)	4. None	CO	25 TPY			
		NOx	15 TPY			
		PM	25 TPY			
		VOC	15 TPY			
		SO2	25 TPY			
		HAP (total)	6.25 TPY			

Table 2 Key:

EU = Emission Unit Number

NO_x = Nitrogen Oxides

CO = Carbon Monoxide

SO₂ = Sulfur Dioxide

PM = Total Particulate Matter, both filterable and condensable

lb/MMBtu = pounds per million British Thermal Units

HAP (total) = total Hazardous Air Pollutants

TPM = tons per month

TPY = tons per consecutive 12-month period

VOC = Volatile Organic Compounds

Table 2 Notes:

Note 1: Compliance with the emission limits shall be determined by computing actual emissions on a monthly basis. The actual emissions shall be computed by multiplying actual fuel usage in MMBtu times the lb/MMBtu limits listed in the table.

Note 2: The Facility-wide limits are from the existing 25% Emission Cap Approval.

COMPLIANCE DEMONSTRATION

The Permittee is subject to, and shall comply with, the monitoring, testing, record keeping, and reporting requirements as contained in Tables 3, 4, and 5:

Table 3	
EU	Monitoring and Testing Requirements
2 and 3	1. The Permittee shall monitor total usage of both natural gas and oil in order to calculate emissions as required by Table 2.
	2. The Permittee shall monitor fuel oil purchases such that only fuel oil with a sulfur content no greater than 0.0015 percent by weight is purchased for use in each unit. The Permittee may use documentation from the supplier that the fuel oil meets the sulfur content limit and shall perform additional oil sulfur analysis if requested by MassDEP.
Facility-wide	3. The Permittee shall monitor all operations to ensure sufficient information is available to comply with 310 CMR 7.12 Source Registration.
	4. If and when MassDEP requires it, the Permittee shall conduct emission testing in accordance with USEPA Reference Test Methods and Regulation 310 CMR 7.13

Table 3 Key:

EU = Emission Unit Number

USEPA = United States Environmental Protection Agency

Table 4	
EU	Record Keeping Requirements
2 and 3	1. The Permittee shall keep records of oil analysis results and vendor-supplied documentation used to demonstrate compliance with fuel oil sulfur content requirements.
Facility-wide	2. The Permittee shall maintain adequate records on-site to demonstrate compliance with all operational, production, and emission limits contained in Table 2 above. Records shall also include the actual emissions of air contaminant(s) emitted for each calendar month and for each consecutive twelve-month period (current month plus prior eleven months). These records shall be compiled no later than the 15 th day following each month. An electronic version of the MassDEP approved record keeping form, in Microsoft Excel format, can be downloaded at http://www.mass.gov/eea/agencies/massdep/air/approvals/limited-emissions-record-keeping-and-reporting.html#WorkbookforReportingOn-SiteRecordKeeping .
	3. The Permittee shall maintain records of monitoring and testing as required by Table 3.

Table 4	
EU	Record Keeping Requirements
	4. The Permittee shall maintain a copy of this Plan Approval, underlying Application and the most up-to-date SOMP for the EU(s) approved herein on-site.
	5. The Permittee shall maintain a record of routine maintenance activities performed on the approved EU(s) and monitoring equipment. The records shall include, at a minimum, the type or a description of the maintenance performed and the date and time the work was completed.
	6. The Permittee shall maintain a record of all malfunctions affecting air contaminant emission rates on the approved EU(s) and monitoring equipment. At a minimum, the records shall include: date and time the malfunction occurred; description of the malfunction; corrective actions taken; the date and time corrective actions were initiated and completed; and the date and time emission rates and monitoring equipment returned to compliant operation.
	7. The Permittee shall maintain records to ensure sufficient information is available to comply with 310 CMR 7.12 Source Registration.
	8. The Permittee shall maintain records required by this Plan Approval on-site for a minimum of five (5) years.
	9. The Permittee shall make records required by this Plan Approval available to MassDEP and USEPA personnel upon request.

Table 4 Key:

EU = Emission Unit Number
SOMP = Standard Operating and Maintenance
Procedure

PCD = Pollution Control Device
USEPA = United States Environmental Protection
Agency

Table 5	
EU	Reporting Requirements
Facility-wide	1. The Permittee shall submit to MassDEP all information required by this Plan Approval over the signature of a "Responsible Official" as defined in 310 CMR 7.00 and shall include the Certification statement as provided in 310 CMR 7.01(2)(c).
	2. The Permittee shall notify the Central Regional Office of MassDEP, BAW Permit Chief by telephone: 508-767-2845, email: Roseanna.Stanley@massmail.state.ma.us or fax : 508-792-7621, as soon as possible, but no later than three (3) business days after discovery of an exceedance(s) of Table 2 requirements. A written report shall be submitted to PermitChief at MassDEP within ten (10) business days thereafter and shall include: identification of exceedance(s), duration of exceedance(s), reason for the exceedance(s), corrective actions taken, and action plan to prevent future exceedance(s).

Table 5	
EU	Reporting Requirements
	3. The Permittee shall report every three years to MassDEP, in accordance with 310 CMR 7.12, all information as required by the Source Registration/Emission Statement Form. The Permittee shall note therein any minor changes (under 310 CMR 7.02(2)(e), 7.03, 7.26, etc.), which did not require Plan Approval.
	4. The Permittee shall provide a copy to MassDEP of any record required to be maintained by this Plan Approval within 30 days from MassDEP's request.
	5. The Permittee shall submit to MassDEP for approval a stack emission pretest protocol, at least 30 days prior to emission testing, for emission testing as defined in Table 3 Monitoring and Testing Requirements.
	6. The Permittee shall submit to MassDEP a final stack emission test results report, within 45 days after emission testing, for emission testing as defined in Table 3 Monitoring and Testing Requirements.

Table 5 Key:

EU = Emission Unit Number

4. SPECIAL TERMS AND CONDITIONS

The Permittee is subject to, and shall comply with, the following special terms and conditions:

- A. The Permittee is subject to and shall comply with the Special Terms and Conditions as contained in Table 6:

Table 6	
EU	Special Terms and Conditions
Facility Wide	1. Any prior Plan Approvals issued under 310 CMR 7.02 shall remain in effect unless specifically changed or superseded by this Plan Approval. The Facility shall not exceed the emission limits and shall comply with approved conditions specified in the prior Plan Approval(s) unless specifically altered by this Plan Approval.

Table 6 Key:

EU = Emission Unit Number

- B. The Permittee shall install and use an exhaust stack, as required in Table 7, on each of the Emission Units that is consistent with good air pollution control engineering practice and that

discharges so as to not cause or contribute to a condition of air pollution. Each exhaust stack shall be configured to discharge the gases vertically and shall not be equipped with any part or device that restricts the vertical exhaust flow of the emitted gases, including but not limited to rain protection devices known as “shanty caps” and “egg beaters.”

- C. The Permittee shall install and utilize exhaust stacks with the following parameters, as contained in Table 7, for the Emission Units that are regulated by this Plan Approval:

Table 7				
EU	Stack Height Above Ground (feet)	Stack Inside Exit Dimensions (feet)	Stack Gas Exit Velocity Range (feet per second)	Stack Gas Exit Temperature Range (°F)
2 and 3	125	4	15.7 max.	275-350

Table 7 Key:

EU = Emission Unit Number

°F = Degree Fahrenheit

5. GENERAL CONDITIONS

The Permittee is subject to, and shall comply with, the following general conditions:

- A. Pursuant to 310 CMR 7.01, 7.02, 7.09 and 7.10, should any nuisance condition(s), including but not limited to smoke, dust, odor or noise, occur as the result of the operation of the Facility, then the Permittee shall immediately take appropriate steps including shutdown, if necessary, to abate said nuisance condition(s).
- B. If asbestos remediation/removal will occur as a result of the approved construction, reconstruction, or alteration of this Facility, the Permittee shall ensure that all removal/remediation of asbestos shall be done in accordance with 310 CMR 7.15 in its entirety and 310 CMR 4.00.
- C. If construction or demolition of an industrial, commercial or institutional building will occur as a result of the approved construction, reconstruction, or alteration of this Facility, the Permittee shall ensure that said construction or demolition shall be done in accordance with 310 CMR 7.09(2) and 310 CMR 4.00.
- D. Pursuant to 310 CMR 7.01(2)(b) and 7.02(7)(b), the Permittee shall allow MassDEP and / or USEPA personnel access to the Facility, buildings, and all pertinent records for the purpose

of making inspections and surveys, collecting samples, obtaining data, and reviewing records.

- E. This Plan Approval does not negate the responsibility of the Permittee to comply with any other applicable Federal, State, or local laws or regulations now or in the future.
- F. The Application is incorporated into this Plan Approval by reference. Should there be any differences between the Application and this Plan Approval, the Plan Approval shall govern.
- G. Pursuant to 310 CMR 7.02(3)(k), MassDEP may revoke this Plan Approval if the construction work is not commenced within two years from the date of issuance of this Plan Approval, or if the construction work is suspended for one year or more.
- H. This Plan Approval may be suspended, modified, or revoked by MassDEP if MassDEP determines that any condition or part of this Plan Approval is being violated.
- I. This Plan Approval may be modified or amended when in the opinion of MassDEP such is necessary or appropriate to clarify the Plan Approval conditions or after consideration of a written request by the Permittee to amend the Plan Approval conditions.
- J. Pursuant to 310 CMR 7.01(3) and 7.02(3)(f), the Permittee shall comply with all conditions contained in this Plan Approval. Should there be any differences between provisions contained in the General Conditions and provisions contained elsewhere in the Plan Approval, the latter shall govern.

6. MASSACHUSETTS ENVIRONMENTAL POLICY ACT

MassDEP has determined that the filing of an Environmental Notification Form (ENF) with the Secretary of Energy & Environmental Affairs, for air quality control purposes, was not required prior to this action by MassDEP. Notwithstanding this determination, the Massachusetts Environmental Policy Act (MEPA) and 301 CMR 11.00, Section 11.04, provide certain “Fail-Safe Provisions,” which allow the Secretary to require the filing of an ENF and/or an Environmental Impact Report (EIR) at a later time.

7. APPEAL PROCESS

This Plan Approval is an action of MassDEP. If you are aggrieved by this action, you may request an adjudicatory hearing. A request for a hearing must be made in writing and postmarked within twenty-one (21) days of the date of issuance of this Plan Approval.

Under 310 CMR 1.01(6)(b), the request must state clearly and concisely the facts, which are the grounds for the request, and the relief sought. Additionally, the request must state why the Plan Approval is not consistent with applicable laws and regulations.

The hearing request along with a valid check payable to the Commonwealth of Massachusetts in the amount of one hundred dollars (\$100.00) and a completed Adjudicatory Hearing Fee Transmittal Form, a copy of which is attached hereto, must be mailed to:

Commonwealth of Massachusetts
Department of Environmental Protection
P.O. Box 4062
Boston, MA 02211

This request will be dismissed if the filing fee is not paid, unless the appellant is exempt or granted a waiver as described below. The filing fee is not required if the appellant is a city or town (or municipal agency), county, or district of the Commonwealth of Massachusetts, or a municipal housing authority.

MassDEP may waive the adjudicatory hearing-filing fee for a person who shows that paying the fee will create an undue financial hardship. A person seeking a waiver must file, together with the hearing request as provided above, an affidavit setting forth the facts believed to support the claim of undue financial hardship.

Enclosed is a stamped approved copy of the application submittal.

Should you have any questions concerning this Plan Approval, please contact Paul Dwiggins by telephone at 508-767-2760, or in writing at the letterhead address.

This final document copy is being provided to you electronically by the
Department of Environmental Protection. A signed copy of this document
is on file at the DEP office listed on the letterhead.

Roseanna E. Stanley
Permit Chief
Bureau of Air and Waste

Enclosures:

- Adjudicatory Hearing Fee Transmittal Form
- Stamped Plan Application

ecc: Fitchburg Board of Health
Fitchburg Fire Department
MassDEP/Boston - Yi Tian
Amec Foster Wheeler – Sean McGuigan